



Total Maximum Daily Load Information Sheet

Lewistown Lake

Water Body ID: 7020

Water Body Segment at a Glance:

County:	Lewis
Nearby City:	Lewistown
Area:	35 acres
Pollutants:	Atrazine
Source:	Agriculture



State map showing location of watershed

Scheduled for TMDL Development:

TMDL development schedules are subject to change.

The most current schedule for TMDL development is available on the department's website at dnr.mo.gov/env/wpp/tmdl/wpc-tmdl-progress.htm

Description of the Problem

A water body is considered impaired when it fails to meet applicable water quality standards. Water quality standards consist of designated uses, water quality criteria, an antidegradation policy and implementation procedures. Lewistown Lake is impaired due to exceedances of water quality criteria that protect unfinished, or raw, drinking water.

Designated uses of Lewistown Lake*

- Warm Water Habitat (WWH)
- Whole Body Contact Recreation Category B (WBC-B)
- Secondary Contact Recreation (SCR)
- Human Health Protection (HHP)
- Irrigation (IRR)
- Drinking Water Supply (DWS)
- Livestock and Wildlife Protection (LWP)

*In addition to these specific uses, all waters of the state are protected by the general water quality criteria that are specified in the state's Water Quality Standards at 10 CSR 20-7.031(4).

Use that is impaired

- Drinking Water Supply (DWS)

Criteria that apply

- Water quality criteria for pesticides is found in Table A of Missouri's Water Quality Standards at 10 CSR 20-7.031. For Atrazine, the water quality criterion is a maximum of 3 micrograms per liter ($\mu\text{g/L}$) in surface waters designated for drinking water supply. Because the criterion is based on health risks associated with a 70-year exposure period, the 3 $\mu\text{g/L}$ is interpreted as a long term average.

Background Information and water quality data

The Lewistown Lake was previously the sole public water supply for the city of Lewistown. The city now receives its drinking water from the Clarence Cannon Wholesale Water Commission and ceased using Lewistown Lake as a drinking water supply source in 2002. Lewistown Lake water was monitored for herbicides from 1991 through 1993 and again in 2002. In the early 1990's the average level of atrazine was 5.01 $\mu\text{g/L}$. In 2002, the average atrazine level was 0.84 $\mu\text{g/L}$. The department judges a water to be impaired by atrazine if the 60 percent upper confidence limit of the mean of the samples is greater than the criterion. The 60 percent upper confidence limit for Lewistown Lake is calculated to be 3.13 $\mu\text{g/L}$, which is greater than the criterion.

Atrazine data for Lewistown Lake

Sampling Organization	Water Body ID No.	Water Body Name	Year	Month	Atrazine ($\mu\text{g/L}$)
UMC/DNR	7020	Lewistown Lake	1991	3	1.1
UMC/DNR	7020	Lewistown Lake	1991	6	19
UMC/DNR	7020	Lewistown Lake	1991	6	8.4
UMC/DNR	7020	Lewistown Lake	1991	11	6.6
MDNR	7020	Lewistown Lake	1992	9	3.7
MDNR	7020	Lewistown Lake	1992	6	3.1
MDNR	7020	Lewistown Lake	1993	6	0.77
MDNR	7020	Lewistown Lake	1992	12	1.2
MDNR	7020	Lewistown Lake	1993	3	1.2
MDNR	7020	Lewistown Lake	2002	6	1.86
MDNR	7020	Lewistown Lake	2001	12	0
MDNR	7020	Lewistown Lake	2002	3	0
MDNR	7020	Lewistown Lake	2002	9	1.5
MDNR	7020	Lewistown Lake	2008	9	0.26
Mean =					3.48
Standard Deviation =					5.11
No. of samples =					14
60 % UCL =					3.13

Lewistown Lake in Lewis County, Missouri



TMDL for Lewistown Lake

The Lewistown Lake TMDL will calculate the maximum amount of each listed pollutant that the stream can receive and still meet water quality standards. The TMDL will also identify all potential or suspected pollutant sources in the watershed and distribute the allowable pollutant loads among those various sources. When developed, the Lewistown Lake TMDL will use the most current and available data. For this reason, the final TMDL may present information that differs from that contained in this information sheet.

For more information call or write:

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